

January 24, 2013, Raleigh: Four Committees met, Mining & Energy Commission.

NOTE: No one is signing up for Public Comment (the last item on each committee agenda).

**Water and Waste Management Committee; Chair, Dr. Vikram Rao and Vice Chair, Charlotte Mitchell**

- a) Fracking Water Management Overview of Ohio, Pennsylvania, Colorado, and Delaware River Basin, by Katherine Marciniak, DENR

**PA** requires Dept-approved water plan and third-party collection of pre-drilling water samples from neighbors.

**CO** operators must purchase water from landowners or municipalities, and they just added monitoring requirements to check groundwater wells over time.

**OH** allows operators to “register” to withdraw up to 100,000 gallons per day from surface water (no permit), and can lease/purchase water from municipal/private sources and use UP to 2 million gallons per day WITHOUT a state permit unless the operator will exceed 60 million gallons in 30 days.

**Delaware River Basin** (PA, DE, NJ, NY, Army Corp Engineers) does concurrent review and has guidelines.

- b) Three components for NC water rules, Katherine Marciniak, DENR:

(1) Withdrawals. “Could” establish a Capacity Use Area; establish a timeframe in the permit for surface withdrawal; establish maximum surface water withdrawal rate at no more than 20% of 7Q10 (7Q10 is the lowest recorded river flow for 7 days in a 10-year period); establish rules for using groundwater within 5,000 ft. of a wellhead; storage, what kind and structure. Water Management plan should be part of the permit. Problem with designating “Capacity Use Area” is that area must be set by Environmental Management Commission and include all water users in the area...can’t single out this industry.

(2) Tracking of water use thru reports and logs

(3) Surrounding water features and discharge—third party to collect and analyze pre-drilling well samples in area

Discussion about individual permits at 7Q10 vs *cumulative impact* if different operations used same surface water at same time. Ken Taylor says relates to the actual stretch of the river the pipe is in. He said that streams are going dry in PA: they do not have cumulative use restrictions.

Golf course example: George Howard wants to compare this to 100 golf courses in area, each using 1 million gallons of water per WEEK, which are not permitted.

Vic Rao not happy with “singling out” this industry for permitting water withdrawals. Should water use be singled out for a specific permit, or a component of the larger permit? DENR had rough draft of rule components and will have the next draft before March 6. Rao asked DENR to see if it can find a relative cost for reuse of frack fluid vs the cost to discharge the frack fluid.

- c) Wastewater Management, DENR’s Deborah Gore. Fluid flowback after frack is 10-30%, with concentrations of various components. Chlorides will not be as concentrated because NC will tap freshwater lakes underground vs the marine shales in PA. Discharges could be (1) reused, (2) go to municipal wastewater treatment, (3) be land-applied like sludge—not likely in NC because of high salinity in flowback, soil and subsurface conditions, or (4) injected back into earth, which is prohibited in NC because of our geology and rock fractures. DENR needs to calculate toxicity load and study the discharge when industry is here. This industry CANNOT discharge waste into surface waters. [EPA will publish gas industry rules in 2014]. West Virginia has injection wells, but they won’t accept outsiders.

Discussion back to golf courses and how much water they use, even in drought. Owners can use water under riparian rights and take directly from streams. Operators will find a way to get water; reuse of frack fluid is attractive option. Question of redress for surrounding landowners if their wells go dry from excessive groundwater pumping by drill operators.

- d) Stakeholders. DENR asked if Stakeholders group (primarily composed of state government agencies) should review the draft rule for water management rules. Yes.